55. (Once Amended)   The method of claim 4, wherein at least one receiver station includes a plurality of processors, said method further comprising the steps of:

generating at least one fixed length message element containing specific cadence information which operates at said at least one receiver station to execute one or more [preprogrogrammed] preprogrammed operating instructions;

generating a plurality of variable length message elements, each variable length element containing at least one instruction and having one of (1) an internal length token, and (2) an associated signal designating a file, said plurality of variable length message elements containing instructions directed to different ones of said plurality of processors;

organizing said generated at least one fixed length message element and said generated plurality of variable length message elements in a sequence, said at least one fixed length message element and said generated plurality of variable length message elements in said sequence comprising at least a portion of a message stream; and

transmitting said message stream.

II.   REMARKS

A.   Introduction

The Non-Final Office Action dated April 2, 1998 (Office Action) has been carefully reviewed and the foregoing amendments made in response thereto.

Claims 2-4, 7, 19-21, 25-26, 33, 35, 37-38, 40-41, 46-47, 50, 52-53 & 55 are amended. Claims 2-55 are pending in the application.

Claims 2-55 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Claims 2-55 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 2, 5-7, 19-25, 32 33, 37, 39 & 40 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Brennand et al., U.S. Pat. No. 4,744,080 in view of Drury, et al., U.S. Pat. No. 4,636,851.

Claims 10 & 13-16 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Brennand et al. in view of Drury, et al., and further in view of Vigarie et al., U.S. Pat. No. 4,748,619.

Claim 3 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Block et al., U.S. Pat. No. 4,225,884.

Claims 3 & 41-48 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Brennand et al., U.S. Pat. No. 4,744,080 in view of Murray, U.S. Pat. No. 4,706,109.

Claims 4 & 49-55 have not been rejected over the prior art and Applicants assume these claims would be in condition for allowance but for the § 112 first and second paragraph rejections.

Claims 8, 9, 11, 17, 18, 26-31, 35, 35 & 38 have not been rejected over the prior art and Applicants assume these claims would be in condition for allowance but for the § 112 first and second paragraph rejections and if the prior art rejection of independent claim 2 is overcome.

Claims 2-55 remain active in this application. No new matter is presented in the foregoing amendments. Approval and entry of same is respectfully requested.

B.   Response to Requirement Imposed Upon Applicants to Resolve Alleged Conflicts Between Applicants' Applications.

Applicants respectfully traverse the requirements of the Office Action paragraph 5.

Paragraph 5 of the Office Action requires Applicants to either:

(1)   file terminal disclaimers in each of the related 328 applications terminally disclaiming each of the other 327 applications; or

(2)   provide an affidavit attesting to the fact that all claims in the 328 applications have been reviewed by applicant and that no conflicting claims exist between the applications; or

(3)   resolve all conflicts between claims in the related 328 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 328 applications.

In addition, Examiner states that failure to comply with any one of these requirements will result in abandonment of the application.

Examiner states that the requirement has been made because conflicts exist between claims of the related co-pending applications, including the present application. Examiner sets forth only the serial numbers of the co-pending applications without an indication of which claims are conflicting. Examiner has also attached an Appendix providing what is deemed to be clear evidence that conflicting claims exist between the 328 related co-pending applications and the present application. Further, Examiner states that an

19

analysis of all claims in the 328 related co-pending applications would be an extreme burden on the Office requiring millions of claim comparisons.

Applicants respectfully traverse these requirements in that Examiner has both improperly imposed the requirements, and has incorrectly indicated that abandonment will occur upon failure to comply with the requirement. Applicants' traversal is supported by the fact that 37 C.F.R. § 1.78 (b) does not, under the present circumstances, provide Examiner with authority to require Applicants to either: 1) file terminal disclaimers; 2) file an affidavit; or 3) resolve all apparent conflicts. Additionally, the penalty of abandonment of the instant application for failure to comply with the aforementioned requirement is improper for being outside the legitimate authority to impose abandonment upon an application. The following remarks in Section (B) will explain Applicants' basis for this traversal.

1. **The PTO's New Requirement is an Unlawfully Promulgated Substantive Rule Outside the Commissioner's Statutory Grant of Power**

The PTO Commissioner obtains his statutory rulemaking authority from the Congress through the provisions of Title 35 of the United States Code. The broadest grant of rulemaking authority -- 35 U.S.C. § 6 (a) -- permits the Commissioner to promulgate regulations directed only to "the conduct of proceedings in the [PTO]". This provision does NOT grant the Commissioner authority to issue substantive rules of patent law. *Animal Legal Defense Fund v. Quigg*, 932 F.2d 920, 930, 18 USPQ2d 1677, 1686 (Fed. Cir. 1991).[1] Applicants

---

[1]Accord Hoechst Aktiengesellschaft v. Quigg, 917 F.2d 522, 526, 16 USPQ2d 1549, 1552 (Fed. Cir. 1990); Glaxo Operations UK Ltd. v. Quigg, 894 F.2d 392, 398-99, 13 USPQ2d 1628, 1632-33 (Fed. Cir. 1990); Ethicon Inc. v. Quigg, 849 F.2d 1422, 1425, 7 USPQ2d 1152, 1154 (Fed. Cir 1988).

respectfully submit that the Examiner's creation of a new set of requirements based upon 37 CFR § 1.78(b) constitutes an unlawful promulgation of a substantive rule in direct contradiction of a long-established statutory and regulatory scheme.

2. The PTO's Requirement is a Substantive Rule

The first determination is whether the requirement as imposed by the PTO upon Applicants is substantive or a procedural rule. The Administrative Procedure Act offers general guidelines under which all administrative agencies must operate. A fundamental premise of administrative law is that administrative agencies must act solely within their statutory grant of power. *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984). The PTO Commissioner has NOT been granted power to promulgate substantive rules of patent law. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996), citing, *Animal Legal Defense Fund v. Quigg*, 932 F.2d 920, 930, 18 USPQ2d 1677, 1686 (Fed. Cir. 1991).

The appropriate test for such a determination is an assessment of the rule's impact on the Applicants' rights and interests under the patent laws. *Fressola v. Manbeck*, 36 USPQ2d 1211, 1215 (D.D.C. 1995). As the PTO Commissioner has no power to promulgate substantive rules, the Commissioner receives no deference in his interpretation of the statutes and laws that give rise to the instant requirement. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996), citing, *Chevron v. Natural Resources Defense Council*, 467 U.S. 837 (1984). <u>When agency rules either (a) depart from existing practice or (b) impact the substantive rights and interests of the effected party, the rule must be considered substantive</u>. *Nat'l Ass'n of Home Health Agencies v. Scheiker*, 690 F.2d 932, 949 (D.C. Cir. 1982), *cert. denied*, 459 U.S. 1205 (1983).

a. **The PTO Requirement is Substantive Because it Radically Changes Long Existing Patent Practice by Creating a New Requirement Upon Applicants Outside the Scope of 37 C.F.R. § 1.78 (b)**

The Examiner's requirement is totally distinguishable from the well articulated requirement authorized by 37 CFR § 1.78 (b), because it (1) creates and imposes a new requirement to avoid abandonment of the application based on the allegation that conflicts exist between claims of the related 328 co-pending applications, and (2) it results in an effective final double patenting rejection without the PTO's affirmative double patenting rejection of the claims. Long existing patent practice recognizes only two types of double patenting, double patenting based on 35 U.S.C. § 101 (statutory double patenting) and double patenting analogous to 35 U.S.C. § 103 (the well-known obviousness type double patenting).[2] These two well established types of double patenting use an objective standard to determine when they are appropriate[3] and have a determinable result on the allowability of the pending claims.

The Examiner's new requirement represents a radical departure from long existing patent practice relevant to conflicting claims between co-pending

---

[2]MPEP § 804(B)(1) states, in an admittedly awkward fashion, that the inquiry for obviousness type double patenting is analogous to a rejection under 35 U.S.C. 103: "since the analysis employed in an obvious-type double patenting determination parallels the guidelines for a 35 U.S.C. 103 rejection, the factual inquires set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis".

[3] The objective test for same invention double patenting is whether one of the claims being compared could be literally infringed without literally infringing the other. The objective test for obviousness type double patenting is the same as the objective nonobviousness requirement of patentability with the difference that the disclosure of the first patent may not be used as prior art.

22

applications of the same inventive entity. Two well established double patenting standards are based on an objective analysis of comparing pending and *allowed* claims. However, in the present application, there are no *allowed* claims. The Examiner's new requirement to avoid a double patenting rejection presumes that conflicts exist between claims in the present application and claims in the 327 copending applications. This presumption of conflicts between claims represents a radical departure from long existing patent practice as defined by 37 C.F.R. § 1.78 (b), which states:

> Where two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application.

Clearly, the only requirement authorized by the rule is the elimination of conflicting claims from all but one application where conflicting claims have been determined to exist. Furthermore, in order to determine that conflicting claims do in fact exist in multiple applications, the only possible analysis is obviousness-type double patenting, since there are no allowed or issued claims by which to employ the 35 U.S.C. § 101 statutory double patenting analysis. Once obviousness-type double patenting analysis has been applied and conflicting claims have been determined to exist, only a *provisional* obviousness-type double patenting rejection is possible until claims from one application are allowed.

In summary, the Examiner's new requirement departs from long-established practice because it (1) creates and imposes a new requirement to avoid abandonment of the application based on the allegation that conflicts exist between claims of the related 328 co-pending applications, and (2) it results in an

23

effective final double patenting rejection without the PTO's affirmative double patenting rejection of the claims.

Therefore, the Examiner's new requirement departs from existing practice and therefore is a **substantive rule** beyond the authority of the PTO and is therefore, invalid.

> b. **The New Requirement is Also a Substantive Rule Because it Adversely Impacts the Rights and Interests of Applicants to Benefits of the Patent**

The rights and benefits of a U.S. patent are solely a statutory right. *Merck & Co., Inc. v. Kessler*, 80 F.3d 1543 (Fed. Cir. 1996). The essential statutory right in a patent is the right to exclude others from making, using and selling the claimed invention during the term of the patent. Courts have recognized that sometimes new procedural rules of the PTO are actually substantive rules, e.g. when the new rule made a substantive difference in the ability of the applicant to claim his discovery. *Fressola v. Manbeck*, 36 USPQ2d 1211, 1214 (D.D.C. 1995) (emphasis added), citing, *In re Pilkington*, 411 F.2d 1345, 1349; 162 USPQ 145 (CCPA 1969); and *In re Steppan*, 394 F.2d 1013, 1019; 156 USPQ 143 (CCPA 1967).

The new requirement, on its face and as applied here, is an instance of a PTO rule making a substantive difference in Applicants' ability to claim their invention and, therefore, must be considered a substantive rule. The requirement denies Applicants rights and benefits expressly conferred by the patent statute. The measure of the value of these denied rights and benefits is that the requirement, as applied here, would deny Applicants the full and complete PTO examination of Applicants' claims on their merits, as specified by 37 C.F.R. § 1.105. In addition, to file terminal disclaimers in each of the related 328 applications terminally disclaiming each of the other 327 applications based

24

on the PTO's incomplete examination on the merits would deny Applicants the benefit of the full patent term of 17 years on each of Applicants' respective applications. Applicants respectfully submit that the requirement has a huge impact on their rights and interests in the presently claimed invention.

c. Conclusion: Substantive Rule

In summary, the requirement is a change to long existing practice and/or has a substantive impact on the rights and interests of Applicants to their invention. Either finding means that the new requirement is a substantive rule. Since the Commissioner has no power to issue substantive rules, the requirement is an improperly promulgated substantive rule having no force of law.

3. The PTO Requirement is Outside the Scope of 37 C.F.R. § 1.78 (b)

Rule 78 (b) states that:

Where two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application.

The only **requirement** that Rule 78 (b) authorizes is the elimination of conflicting claims from all but one co-pending applications.

In the instant Office Action, Examiner has not required the elimination of all conflicting claims from all but one application, but instead has required Applicants to: 1) file terminal disclaimers in each of the related 328 applications; 2) provide an affidavit; or 3) resolve all conflicts between claims in the related 328 applications. None of the options in the requirement is authorized by Rule 78 (b), and therefore Applicants respectfully submit that such a requirement is improper.

25

With respect to the PTO's authority to act within Rule 78 (b) regarding the rejection of conflicting claims, MPEP § 822.01 states that:

> Under 37 CFR § 1.78 (b), the practice relative to overlapping claims in applications copending before the examiner..., is as follows: Where claims in one application are unpatentable over claims of another application of the same inventive entity because they recite the same invention, *a complete examination should be made of the claims of each application* and all appropriate rejections should be entered in each application, including rejections based upon prior art. *The claims of each application may also be rejected on the grounds of* **provisional** *double patenting on the claims of the other application* whether or not any claims avoid the prior art. Where appropriate, the same prior art may be relied upon in each of the applications. MPEP 822.01 (6th Ed., Rev. 3, 1997), (*emphasis added*).

In light of the requirement of the Office Action, MPEP § 822.01 and 37 CFR § 1.78 (b) are not applicable since there has not been any rejection with regard to the elimination of conflicting claims from all but one co-pending application.

4. The Assertion That Failure to Comply with the Requirement Will Result in Abandonment of Applicants' Application is Improper

Applicants' prospective failure to comply with the above requirements cannot properly result in abandonment of the present application. Applicants respectfully submit that abandonment of an application can properly occur only:

(1) for failure to respond within a provided time period (under Rule 135);

(2) as an express abandonment (under Rule 138); or

(3) the result of failing to timely pay the issue fee (under Rule 316).

There is no provision in the rules permitting abandonment for failure to comply with any of the presented requirements. To impose an improper requirement upon Applicants and then hold the application is to be abandoned for failure to comply with the improper requirement violates the rules of practice

before the USPTO. Furthermore, Examiner is in effect attempting to create a substantive rule that is above and beyond the rulemaking authority of the USPTO, and therefore is invalid.

In the *Application of Mott*, 539 F.2d 1291, 190 USPQ 536 (CCPA 1976), the applicant had conflicting claims in multiple applications. The CCPA held that action by the Examiner that would result in automatic abandonment of the application was legally untenable. *Id.* at 1296, 190 USPQ at 541. In the present application, Examiner has asserted that there are conflicting claims in multiple applications, and that non-compliance of the Office Action's requirement will result in an automatic abandonment. Therefore, under *Mott's* analysis, the Office Action's result of abandonment of Applicants' application is legally untenable.

5. Response to Apparent Conflict of Claims

Applicants submit that the presentation of the Office Action Appendix fails to demonstrate any conflicts between claims of the present application and claims of the co-pending applications. Rather, the Office Action Appendix compares representative claims of *other* applications in attempt to establish that "conflicting claims exist between the 328 related co-pending applications." Absent any evidence of conflicting claims between the Applicants' present application and any other of Applicants' co-pending applications, any requirement imposed upon Applicants to resolve such alleged conflicts is improper.

6. Request for Withdrawal of Requirement

Therefore, Applicants respectfully request that Examiner reconsider and withdraw the requirement that Applicants: (1) file terminal disclaimers in each of the related 328 applications terminally disclaiming each of the other 327

27

applications; (2) provide an affidavit attesting to the fact that all claims in the 328 applications have been reviewed by applicant and that no conflicting claims exist between the applications; or (3) resolve all conflicts between claims in the above identified 328 applications by identifying how all the claims in the instant application are distinct and separate inventions from all the claims in the above identified 328 applications, which upon failing to do so will abandon the application.

7.   Filing of Supplemental Oath

Notwithstanding the foregoing, Applicants will file a supplemental oath under 37 C.F.R. § 1.67 for each application when Examiner identifies allowable subject matter. Applicants respectfully propose that the filing of individual supplemental oaths attesting to the absence of claim conflicts between previously patented claims and subsequently allowed claims is a more reasonable method of ensuring the patentable distinctness of subsequently allowed claims.

Under 37 C.F.R. § 1.105, § 1.106 & § 1.78 (b), Examiner has the duty to make every applicable rejection, including double patenting rejection. Failure to make every proper rejection denies Applicants all rights and benefits related thereto, *e.g.*, Applicants' right to appeal, etc. Once obviousness-type double patenting analysis has been applied and conflicting claims have been determined to exist, only a *provisional* obviousness-type double patenting rejection is possible until claims from one application are allowed.

C.   Information Disclosure Statement

The Applicants appreciate the Examiner's review of the Information Disclosure Statements filed 12/11/95, 12/22/95, 4/17/97 & 4/7/97 and have addressed those specific concerns raised in paragraph 6 of the Office Action. It is the Applicants' understanding that the Examiner raised the following 5 issues:

28

(1)   the reasons for such a large number of references cited,

(2)   foreign language references cited without a statement of relevance or translation have not been considered,

(3)   the relevancy of numerous references listed in the Information Disclosure Statements are subsequent to the Applicants' latest effective filing date of 9/11/87,

(4)   citation of references apparently unrelated to the subject matter of the claimed invention, and

(5)   citation of database search results listed in foreign languages where no copy was provided.

1.   Reason for Citation of Large Number of References

The reason that the Applicants submitted such a large number of references in the Information Disclosure Statements was that a large portion of the information cited by the Applicants was brought to the Applicants' attention in the discovery processes in a previous litigation in the United States District Court for the Eastern District of Virginia (*Personalized Mass Media Corp. v. The Weather Channel, Inc.* Docket No. 2:95 cv 242) and an investigation by the International Trade Commission (*In the Matter of Certain Digital Satellite System (DSS) Receivers And Components Thereof,* No. 337 TA 392, which was direct to U.S. Pat. No. 5,335,277) regarding claims in the Applicants' related issued patents. The documents listed in the Information Disclosure Statement were cited during the previous litigation/investigative proceedings by the alleged infringers in the aforementioned proceedings as being relevant and material to patentability of the claims in the related patents. The Applicants submitted those materials in the Information Disclosure Statement to the PTO at the earliest possible time in order to file them in compliance with the 3 month requirement stated in the

29

certification used to submit the Information Disclosure Statement before the

Office Action was issued as is necessary under 37 CFR § 1.97 (c) (1). In such

haste, entries were inadvertently submitted which do not appear on their face to

be material to the patentability of the present application. Applicants have

corrected this error with the submission of the corrected Information Disclosure

Statement as shown in Appendix B. However, it is the Applicants'

understanding that not all references cited must be material to patentability in

order for such references to be considered. In § 609 of the MPEP, it states,

> "[t]hese individuals also may want the Office to consider
> information for a variety of reasons: e.g., without first determining
> whether the information meets any particular standard of
> materiality, or because another patent office considered the
> information to be relevant in a counterpart or related patent
> application filed in another country, or to make sure that the
> examiner has an opportunity to consider the same information that
> was considered by the individuals that were substantially involved
> in the preparation or prosecution of a patent application."

Applicants' position is that information that was considered material in

previous litigation would fall into the 'variety of reasons' category as stated

above. Applicants' intention was not to confuse or make difficult the

examination process for the Examiner, but was instead to be forthright and open

in disclosing all information deemed to be relevant to the application in issue by

third parties.

2. Citations of Foreign Language References

Applicants have re-examined the foreign references listed in all of the

Information Disclosure Statements and have either eliminated such references

from the list, included translations herewith or provided statements as to the

relevancy of such references (APPENDIX A). The inclusion of translations with

this response is in compliance with 37 C.F.R. § 1.97 (f) which states in part, "[I]f a

30

bona fide attempt is made to comply with 37 C.F.R. § 1.98, but part of the required content is inadvertently omitted, additional time may be given to enable full compliance." The omission of any translations and/or relevancy statements for foreign references were inadvertent and unintentional and are herein submitted in accordance with 37 C.F.R. § 1.97 (f).

3.   **References in the Information Disclosure Statements Subsequent to Applicants' Latest Effective Filing Date of 9/11/87**

Examiner stated "[n]umerous references listed in the IDS are subsequent to the applicant's latest effective filing date of 9/11/87, therefore, the relevancy of those references is unclear." Upon further examination, the Applicants have eliminated those patents and publications after the effective filing date for the present application. It is the Applicants' understanding that the effective filing date for the present application is 9/11/87.

4.   **Citation of Unrelated References**

Applicants appreciate the Examiner pointing out such references that were listed yet on their face appear to be unrelated to the subject matter of the present application. In response to such information, the Applicants have reviewed the cited references and removed any such references which appear to be unrelated on their face to the claimed subject matter such as the patent for a beehive, the patent for a chemical compound and numerous computer printout search results.

5.   **Citation of Database Search Results**

Database search results listed in foreign languages where no copy was provided have been eliminated from the substitute Information Disclosure Statement included with this office action.

The Applicants offer the corrected Information Disclosure Statement (APPENDIX B) as a substitute to the previously filed Information Disclosure Statement filed 4/7/97. No new entries have been entered, only citations which have, upon further examination, been determined not to be relevant to the claimed subject matter have been eliminated, typographical errors have been corrected, dates inserted where possible and the list shortened as a result. It is the Applicants' intention that such corrected Information Disclosure Statement will help clarify any issues previously raised by the Examiner and aid in the prosecution of the present patent application.

D.   Response to Rejections under 35 U.S.C. § 112

Paragraphs 8 & 9 of the Office Action reject claims 2-55 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

1.   Support for "Digital Television" based on Applicants' disclosure

Claims 2 and 22 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. More specifically, the Final Office Action requests that the Applicants "submit evidence (e.g. a U.S. Patent or a printed publication) which supports the allegations and assumptions of applicant's [sic] original [disclosure], thereby showing that the means needed to format and transmit "digital television signals" in a manner that was compatible with the methods described and claimed by the applicant were in fact

well known to those skilled in the art at the time of applicant's [*sic*] alleged invention."

Applicants submit that U.S. Patent No. 3,906,480 issued on September 16, 1975 to Schwartz et al. discloses the means needed to format and transmit "digital television signals" in a manner compatible with the methods described and claimed by the Applicants. Schwartz et al. discloses decomposing vectors to be displayed into elemental vector segments that are *encoded* as vector symbols. Schwartz et al. further discloses that the system has the capability of storing each vector in a compacted (*i.e.*, compressed) form while retaining its attributes and identity in storage. Applicants contend that the Parent Application to the presently claimed invention clearly discloses the usage of digital data in a television signal similar to that which is disclosed in Schwartz et al. The means needed to format and transmit digital television signals in this manner were well known to those skilled in the art at the time of the Applicants' invention.

Applicants further contend that in 1981, both analog television and digital television were well known to those having ordinary skill in the art. From column 13, line 1 to column 14, line 62, the '81 case discloses the use of encryption to govern the reception of programming. Encryption is "a process for enciphering or encoding data to prevent illicit entry into a system." *Webster's II, New College Dictionary*, 1995. To encode is "to convert (a character) into an equivalent combination of bits." *Id.* Thus, encryption is a process for converting data into an equivalent combination of digits to prevent illicit entry into a system. From column 13 , line 68 to column 14, line 4, the '81 case explicitly discloses that:

> "A decryptor does not necessarily decrypt the entire transmission. Encrypted transmissions may be only partially encrypted. For example, only the video portion of the transmission may be encrypted. The audio portion may remain unencrypted."

Since throughout the '81 case it is disclosed that programming transmissions may be of television, it is submitted that the cited passage discloses that television programming transmissions (i) include a video portion and an audio portion, and (ii) may be either entirely encrypted or partially encrypted. Since encrypting a television programming transmission involves "convert[ing] (a [television programming transmission]) into an equivalent combination of bits," clearly the '81 case discloses "digital television."

Further, the '81 case discloses that "[m]icrocomputer, 205, is preprogrammed to respond to . . . instruction signals embedded in the "Wall Street Week" program[m]ing transmission . . . [that] instruct microcomputer, 205, to generate several graphic video overlays." (col. 19, lines 42-49). These instructions are embedded in *digital* form into the television programming ("Wall Street Week") by *encoding* means (col. 9, lines 31-33). Thus, the television programming transmission is disclosed as containing embedded, encoded digital signals that generate television programming. The '81 case discloses the television programming transmission including digital signals and, thus, being "digital television." The digital signals result in display of processor output of graphic imaging in television programming.

At column 6, lines 22- 68, column 7, lines 1-5, it is disclosed that a television programming transmission is received at the signal processor of Figure 1. A particular frequency of the television programming transmissions is selected and passed to the TV signal decoder of Figure 2A. At the TV signal decoder, the selected frequency of the programming transmission is then transmitted through paths A, B and C to three separate digital detector devices, 34, 37 and 38 ,that are designed to act on particular frequency ranges in which *encoded* signal information may be found. Digital detector 34 decodes *encoded* signal information in the line portion or portions of the analog video portion of

34

the television programming transmission. Likewise, digital detector 37 determines whether a particular encoded signal is present in the audio portion of the television programming transmission. Digital detector 38 receives a separately defined, and clearly digital, transmission. Since paths A and B carry the video and audio portions, of the television transmission, respectively, the separately defined portion is at least some of that which remains in the television programming transmission. Since the television programming transmission is disclosed to be comprised of a video portion, an audio portion and embedded encoded digital signals, the separately defined transmission is at least some of the television programming transmission that contains the encoded digital signals. Thus, it is discloses that the audio portion, video portion and signal portion of the television programming transmission may be entirely or partially encoded in digital format, separately defined from analog format, thereby comprising "digital television."

> ## 2. Specification support for Applicants' claim language

The following tables list Applicants' claim language in the left column which corresponds to the specification support in the right column.

a. Claim 2

receiving an information transmission containing a digital television signal and a message stream;	E.g., page 22 line 19. Page 22 lines 1 & 25-27, with page 25 lines 1-6 & 9-14 and page 26 lines 8-11. Page 59 lines 29-33.
detecting said message stream in said information transmission; selecting one message of said detected message stream;	E.g., page 22 line 23 with page 163 line 26. E.g., page 165 line 4 to page 167 line 3.
inputting at least a first portion of said selected one message to a control processor;	E.g., page 165 lines 4-11.
selecting control information in said inputted first portion of said selected one message;	E.g., page 165 lines 8-13. E.g., page 95 lines 28-30. E.g., page 165 lines 23-26 with page 160 lines 3-4 & 8-9.

selecting and outputting under the control of said control processor, other portions of said message stream to said plurality of processors, based on said control information;	Page 174, lines 4-17 and page 171 lines 1-7.
processing said selected other portions of said message stream simultaneously at said plurality of processors;	E.g., page 171 lines 8-18. E.g., page 174, lines 4-10. E.g., page 178 lines 21-25.
controlling the timing of communicating television programming in accordance with said message stream; and	E.g., page 59 lines 29-33, page 171 lines 25-29 and page 163 line 26. Page 181 lines 21-22.
storing information evidencing the availability, use or usage of said television programming or said message stream.	E.g., page 162 line 32, page 92 lines 9-16, page 28 lines 10-35. E.g., page 173 line 30 to page 174 line 23.

b.   Claim 3

generating a control portion of said message stream at said transmission station that is effective cause	E.g., page 385 lines 10, 15-16 and 26-28 with page 44 lines 14-26.
said first control processor to select portions of said message stream that control said control processor and said remainder of said plurality of processors to perform different functions comprising	Page 484 lines 12-15 and Fig. 3A & Fig. 2A with respect, e.g., page 166line 30 to 167 line 7 and page 170 lines 23 to page 171 line 7 with page 175 line 26 to page 176 line 11. Page 484 lines 15-18.
(i) processing television programming and (ii) controlling the timing of communicating said television programming;	Page 484 lines 14-18 and page 486 lines 23-27. Page 491 line 9, e.g., page 490 lines 26-30 with page 44 lines 14-26.

c.   Claim 4

(1) receiving an information transmission to be transmitted;	Page 374 line 29 to page 375 line 12.
(2) receiving an instruct signal which is effective to one of: (a) effect a transmitter station to generate at least a first message that is effective to enable a receiver station to control the reception or presentation of television programming and meter or monitor the availability, use or usage of said television programming or said at least a first message; and	Page 377 lines 14-16 and 26-35 with page 378 lines 7-12. E.g., page 385 lines 9-16, page 484 lines 2-18, page 485 lines 14-18. Page 491 lines 10-16 and page 470 lines 10-21. E.g., page 385 lines 18-28 and page 557 lines 8-14.
(b) effect a first receiver station to	E.g., page 385 lines 9-16, page 484 lines 2-18, page 485 lines 14-

generate at least a first message that is effective to enable a second receiver station to control the reception or presentation of television programming and meter or monitor the availability, use or usage of said television programming or said at least a first message;	18. Page 491 lines 10-16 and page 470 lines 10-21. E.g., page 385 lines 18-28 and page 557 lines 8-14.
(3) receiving a transmitter control signal which operates at one of said transmitter station and said first receiver station to communicate said at least a first message to a transmitter; and	Page 385 lines 3-13.
(4) transmitting said information transmission, said instruct signal and said transmitter control signal.	Page 374 line 32 to page 375 line 2, page 377 line 26 to page 378 line 5 and page 385 lines 3-8.

d.   Claim 5

The method of claim 2, further comprising the step of programming said control processor to execute a controlled function in response to said one message.	Page 160 line 33 to page 161 line 3.

e.   Claim 6

The method of claim 5, further comprising the step of programming said control processor to compare information stored in at least a first of said at least one register memory with control function invoking information.	Page 160 line 33 to page 161 line 5 with page 166 line 35 to page 167 line 3.

f.   Claim 7

The method of claim 6, further comprising the step of programming said control processor to compare information stored in at least a second of said at least one register memory with information that identifies the composition of said one message.	Page 160 line 33 to page 161 line 6. Page 52 lines 1-6 and page 171 line 28 to page 172 line 5. Page 168 lines 21-30 with page 160 lines 3-4 and 18-19.

g.   Claim 8

The method of claim 2, wherein said at least one register memory includes an input signal register memory and said step of selecting control information in said inputted first portion of said selected one message	Page 160 lines 3-5 & 8-9. Page 165 lines 8-13, page 95 column 28-30, page 165 lines 23-26.

and communicating said selected control information to a plurality of registers memories comprises:	
communicating said at least a first portion of said selected one message to said input signal memory;	Page 165 lines 8-11.
selecting information at said input signal memory to compare or communicate; and	Page 165 lines 23-27.
communicating said control information to at least a second of said at least one register memory.	Page 165 lines 25-26 with page 160 lines 3-4 & 8-9.

       h.   **Claim 9**

The method of claim 8, further comprising the step of communicating at least one of said other portions of said message stream to said input signal register memory.	Page 167 line 25 to page 168 line 3 and page 169 lines 17-18 with page 174 lines 10-17.

       i.   **Claim 10**

The method of claim 2, further comprising the step of controlling a switch to output at least one of said selected other portions of said message stream to a specific one of said plurality of processors.	Page 174 line 5-1. See Fig. 3A.

       j.   **Claim 11**

The method of claim 10, further comprising the step of controlling said switch to communicate said at least one of said selected other portions of said message stream from one of (1) said control processor and (2) a buffer that inputs to said control processor.	Page 174 lines 5-7. Page 171 lines 2-3 with # 39E, 39F, 39I and 39J in Fig. 3A. See also page 69 lines 10-12 and 28-29.

       k.   **Claim 12**

The method of claim 10, wherein said switch outputs said at least one of said selected other portions to said control processor.	Page 164 line 35 to page 165 line 15, page 166 lines 11-13, page 167 lines 25-28 and page 169 lines 7-10.

       l.   **Claim 13**

The method of claim 10, wherein said	

switch outputs said at least one of said selected other portions to one of a signal processor and a central processor.	Page 174 lines 5-1 with page 174 line 8. Page 171 line 3 and page 22 lines 32-33.

m.   Claim 14

The method of claim 10, further comprising the step of programming said control processor to control said switch based on information contained in said message stream.	Page 161 lines 30-33 with line 16 E.g., page 170 line 17 to page 171 line 7.

n.   Claim 15

programming said control processor with comparison information to serve as a basis for determining the length or format of said at least one segment of said message stream; and	Page 168 lines 7-16 and page 51 line 35 to page 52 line 6.
programming said control processor to compare information stored at said at least one register memory to said comparison information.	Page 171 line 18 to page 172 line 5.

o.   Claim 16

The method of claim 14, wherein said control processor and said switch are located on a single microchip.	Page 165 line 33 and line 162 lines 11-15. #39I and 39J in Fig. 3A.

p.   Claim 17

The method of claim 2, wherein said control processor receives said at least a first portion of said message from a first of said plurality of processors and controls outputting to a second of said plurality of processors.	Page 156 line 33 to page 157 line 14 and page 171 lines 2-3.

q.   Claim 18

The method of claim 17, wherein said first processor performs one of (1) converting information detected in said message stream based on protocols and (2) assembling processor code based on information detected in said message stream, said message further comprising the step of communicating machine language code to said second processor in said selected other portions of said message stream.	Page 157 lines 5-7. Page 37 lines 22-25 with page 156 line 33. Page 171 lines 2-7 with page 24 lines 14-20.

r. Claim 19

The method of claim 2, wherein a decryptor decrypts at least some of said message stream, said method further comprising the step of outputting one or more of said selected other portions of said message stream to said decryptor.	Page 88 lines 23-25, page 197 lines 11-15. Page 204 line 26 to page 205 line 13.

s. Claim 20

The method of claim 19, further comprising the steps of: selecting at least a portion of said message stream; and	Page 202 lines 4-18.
controlling said decryptor in accordance with said selected at least a portion of said message stream.	Page 202 lines 19-25 and page 203 lines

t. Claim 21

The method of claim 20, wherein said selected at least a portion of said message stream comprises a decryption key.	Page 295 lines 31 in page 295 line 24 to page 296 line 2.

u. Claim 22

The method of claim 21, further comprising the step of decrypting at least some of said digital television signal in accordance with said decryption key.	Page 295 line 33 to page 296 line 2 with page 288 line 30 to page 289 line 21 and page 458 line 16.

v. Claim 23

The method of claim 19, further comprising the steps of: storing a decrypted portion of said at least some of said message at some or all of said at least one register memory; and	Page 207 lines 10-19 with page 207 line 32 to page 208 line 5 and page 160 lines 3-5 & 8-9.
processing decrypted portions of said message stream simultaneously.	Page 207 lines 10-19 with page 210 lines 18-31 and page 211 lines 3-6 with page 171 lines 8-18.

w. Claim 24

The method of claim 23, further comprising the step of decrypting processor code contained in said message stream.	Page 206 line 32 to page 207 line 9 with page 198 lines 13-14, page 210 lines 33-35 and page 24 lines 14-20.

x.   Claim 25

The method of claim 2, wherein a standard informs said receiver station a signal to be processed, said method further comprising the step of evaluating at least some of said selected one message based on said standard.	Page 69 lines 9-32 with page 74 lines 13-23. Page 70 line 31 to page 74 line 12 with page 171 lines 8-10.

y.   Claim 26

The method of claim 25, wherein further comprising the step of: storing at least a portion said standard at one or more of a Standard Word and a Standard Length memory; and	Page 70 lines 13-16 and e.g., page 76 lines 12-18.
programming said receiver station to compare data received in said information transmission to information contained at said one or more of a Standard Word and a Standard Length memory.	Page 69 lines 25-28 with page 69 lines 14-17 with page 70 line 31 to page 74 line 12.

z.   Claim 27

The method of claim 25, wherein said receiver identifies, based on said standard, one of (1) an end of a prior message and (2) a header in said selected one message.	Page 481 lines 3-9 with respect to page 62 line 23 to page 63 line 8; page 583 lines 2-5. Page 484 lines 12-14.

aa.   Claim 28

The method of claim 25, further comprising the step of causing said control processor to process an interrupt signal based on said standard.	Page 74 lines 13-23, page 74 lines 27-31 and page 175 lines 15-16.

bb.   Claim 29

The method of claim 2, further comprising the step of programming said receiver station to communicate a processor interrupt signal to at least one of said plurality of processors.	Page 69 lines 25-28, page 74 lines 13-23. Page 75 lines 27-31 and Fig. 3A including #39F.

cc.   Claim 30

The method of claim 29, wherein two or more of said plurality of processors are adapted to communicate or respond to processor interrupt	Page 202 lines 5-20, page 215 lines 14-18 and page 500 lines 10-15 with page 195 lines 2-6.

41

signals, said method further comprising the step of programming said receiver station to select at least one of said two or more processors to interrupt.	Page 160 line 33 to page 161 line 8 with, e.g., page 194 line 29 to page 195 line 6 and page 500 lines 10-15.

dd.   Claim 31

The method of claim 30, wherein said control processor selects said at least one of said two or more processors, said method further comprising the steps of: detecting a processor interrupt signal in said information transmission; and	Page 71 line 26-30, page 74 lines 13-16 and page 175 lines 11-14.
inputting said processor interrupt signal to said control processor.	Page 175 lines 15-16.

ee.   Claim 32

The method of claim 2, wherein said receiver station includes a video monitor and a first of said plurality of processors generates a video signal to be displayed as part of said television programming, said method further comprising the step of outputting to said first processor a first of said selected other portions of said message stream which causes said first processor to communicate said video signal to said video monitor.	Page 491 line 15. Page 485 lines 15-18 and page 486 lines 23-27 wit page 491 lines 13-16. Page 491 lines 9-16 See also, e.g., page 189 lines 11-14 with 19-23, with page 26 lines 2-11 and page 24 line 22 to page 25 line 14.

ff.   Claim 33

The method of claim 32, wherein said receiver station includes a speaker and a second of said plurality of processors to generates an audio signal containing audio to be emitted as part of said television programming, said method further comprising the step of outputting to said second processor a second of said selected other portions of said message stream which causes which causes said second processor to communicate said audio signal to said speaker.	Page 20 line 16 to 20. Page 487 lines 32-35 and page 489 lines 30-32. Page 491 line 30 to page 493 line 21. Page 492 lines 9-30.

gg.   Claim 34

The method of claim 33, wherein said receiver station includes one or more	

of a tuner and a portion receiver and a third of said plurality of processors is adapted to control said one or more of a tuner and a portion receiver, said method further comprising the step of programming said third processor to control said one or more of a tuner and a portion receiver based on information contained in said selected other portions of said message stream.	Page 410 line 14 and page 35 lines 7-11. Figs. 7 & 7B, or Figs. 2A & 3A. Page 408 lines 32-34 and page 410 lines 19-20. Page 459 lines 17-24 and e.g., page 460 lines 12-19 with page 160 line 33 to page 161 line 12.

hh.   Claim 35

The method of claim 2, wherein at least one of said selected other portions of said message stream contains first processor code that controls at least one of said plurality of processors to generate information content of one or more video or audio signals, said method further comprising the steps of: selecting second processor code contained in said selected one message; and	Page 171 line 5 wit page 24 lines 14-16, page 485 lines 14-18 and page 487 lines 29-35. Page 161 lines 30-34 with lines 11-13.
communicating said first processor code in accordance with said second processor code.	Page 170 line 26 to page 171 line 7 with page 166 line 34 to page 167 line 7.

ii.   Claim 36

The method of claim 35, wherein said second processor code programs said control processor to select control information in said message stream and communicate said selected control information to said at least one register memory, said method further comprising the step of processing control information of a new composition and/or length in accordance with said second processor code.	Page 516 line 15 and page 528 lines 11-15. Page 530 lines 1-8.

jj.   Claim 37

The method of claim 2, wherein a second receiver station includes a second plurality of processors, said method further comprising the steps of: receiving said information	Page 470 lines 9-17 and page 480 lines 15-17. Figs. 7, 7E, 7F, 2A & 3A. Page 386 line 9.

43

transmission at a signal generator operatively connected to a transmitter;	#82 and #83 in Fig. 6B.
generating (1) first cadence information which is effective at said receiver station to execute a predetermined instruction, and (2) at least one message element containing one or more instructions to be directed to a specific one of said second plurality of processors; and	Page 385 line 10 with line 26, page 60 lines 13-18, page 171 lines 14-18 and lines 28-30. Page 385 lines 28-30 with line 60 lines 19-21 and page 484 lines 12-18.
embedding said cadence information and said at least one message element in said information transmission; and	Page 386 lines 7-11.
communicating said information transmission, said cadence information and said at least one message element to said transmitter.	Page 386 lines 7-14, Fig. 6B.

kk.   Claim 38

The method of claim 37, wherein one of said second plurality of processors includes a plurality of register memories, said method further comprising the steps of: communicating to said signal generator second cadence information which operates at said plurality of register memories to select a portion of one message of said message stream.	Page 386 lines 10-14 with page 387 lines 19-25 with page 490 lines 24-34. E.g., page 182 line 16 to page 183 line 15 with page 160 lines 3-5 & 8-9.

ll.   Claim 39

The method of claim 37, wherein said signal generator embeds said generated message stream in said information transmission, said method further comprising the step of communicating said television programming to said transmitter in said information transmission.	Page 386 lines 7-14. Page 374 line 32 to page 375 line 8, page 355 lines 5-7, page 340 line 34 and page 344 lines 26-30.

mm.   Claim 40

The method of claim 37, wherein said second receiver station includes one of a tuner and a portion receiver operatively connected to said plurality of processors, said method further comprising the steps of: transmitting an instruction which	Page 408 lines 18-27 with page 407 lines 10-16.

operates at said receiver station to control said one of said tuner and said portion receiver to receive a signal containing at least some of said television programming; and	See also specification support for claim 34 of this response.
transmitting said television programming.	Page 374 line 32 to page 375 line 8, page 355 lines 5-7, page 340 line 34 and page 344 lines 26-30.

nn.   Claim 41

generating a first instruction specifying a control function to be executed;	Page 385 line 10 with lines 26-27 and page 44 lines 19-25.
generating a second instruction specifying a data structure, length, or format;	Page 35 line 10 with lines 21-22 and page 51 line 35 to page 52 line 7.
organizing said first and second instructions in a sequence, said sequence comprising a command; and	Page 385 lines 24-28 with page 59 line 21 and page 44 lines 17-26.
communicating to said signal generator second cadence information which operates at said receiver station to select a portion of one message of said message stream.	Page 385 lines 24-28 with page 21-22, page 51 lines 1-5, page 60 lines 12-17 and page 169 lines 3-19. Page 168 line 6 to page 169 line 19.

oo.   Claim 42

The method of claim 41, further comprising the steps of: processing data specifying a condition which must exist at said receiver station; and	Page 490 line 28 to page 491 line 6 with page 452 lines 24-30.
including said data specifying a condition in said command.	Page 44 line 33 to page 45 line 3.

pp.   Claim 43

The method of claim 41, wherein said command operates at said receiver station to execute one or more instructions contained in an instruction set, said method further comprising the step of organizing said message stream to include said instruction set.	Page 44 lines 17-25 and page 46 lines 8-11 with page 484 lines 12-18. Page 385 line 29 to page 386 line 2.

qq.   Claim 44

The method of claim 41, further comprising the step of transmitting operating instructions which enable said receiver station to execute said	Page 516 line 15 with page 521 lines 27-32 and page 530 lines 13-29 in page 528 line 11 to page 530 line 29, with page 160 line 33 to page 161 line 3.

control function in response to said command.	

rr.   Claim 45

The method of claim 41, wherein said command operates at said receiver station to present one or more receiver specific data at an output device, said receiver specific data generated in accordance with said instruction set, said method further comprising the step of transmitting one or more of (1) subscriber transaction data to be stored and processed at said receiver station and (2) meter-monitor data.	Page 491 lines 10-16 with page 490 lines 15-19. Page 485 lines 14-18 and page 486 lines 20-27. Page 448 lines 4-13 and page 448 line 30 to page 449 line 9. Page 385 lines 13 with line 28.

ss.   Claim 46

The method of claim 41, further comprising the step of transmitting a signal which operates at said receiver station to communicate a processor interrupt to at least a portion of said plurality of processors.	Page 385 line 13 with line 31 Page 74 lines 13-30 and page 75 line 27-31.

tt.   Claim 47

The method of claim 46, further comprising the step of transmitting an instruction which operates at said receiver station to control a first of said plurality of processor to selected a second processor to be interrupted.	Page 499 lines 24-27 with page 500 line 5 and lines 13-15. (In contrast, e.g., page 200 line s 16-20 with page 202 lines 4-11.)

uu.   Claim 48

The method of claim 3, further comprising the steps of: selecting at least some of said television programming at said transmission station;	Page 379 line 31 to page 380 line 6, page 366 lines 4-7 and page 506 lines 17-21.
selecting meter-monitor data; and	Page 384 lines 4-10.
organizing said message stream to include said selected at least some of said television programming and said selected meter-monitor data.	Page 384 lines 13-17 and page 20-21.

vv.   Claim 49

generating one or more second messages, each of said second messages containing second cadence	Page 383 lines 26-34. Page 384 line 14 with page 60 lines 12-17 and page 384 lines 20-22.

information and some other part of said data and an instruction set;	
organizing said first and second messages in a sequence, said sequence comprising a message stream; and	Page 384 lines 13-23, page 385 lines 24-31, page 59 lines 31-33.
transmitting said message stream.	384 line 30 to page 385 line 2 and page 386 lines 7-9.

ww.   Claim 50

generating a second message containing multiple elements of fixed length, said multiple elements comprising a command;	E.g., page 383 lines 26-28 with page 384 lines 13-16 and page 385 lines 9-10 with lines 25-27. Page 61 lines 10-12 and page 44 lines 17-18.
firstly embedding said first message into an information transmission;	Page 384 lines 30-34.
subsequently embedding said second message into said information transmission, said first message firstly and said second message subsequently in said information transmission comprising a message stream; and	Page 386 lines 7-11. Page 59 line 21.
transmitting said information transmission.	Page 384 line 34 to page 385 line 2 and page 386 lines 11-14.

xx.   Claim 51

selecting code to be directed to said plurality of processors;	Page 385 lines 24 and lines 29-30 with page 382 lines 2-4 and page 379 lines 18-26.
generating one or more first elements or fields to identify a structure of said at least a first message;	Page 385 line 10 and line 26, page 59 line 34 to page 60 line 1, Page 60 lines 19-21 and page 51 line 35 to page 52 line 6.
generating one or more second elements or fields to identify one or more processor instructions in said at least a first message;	Page 385 line 10 and lines 26-27 with page 60 lines 19-21 and page 51 line 35 to page 52 line 6.
generating one or more third elements or fields to identify a data format in said at least a first message; and	Page 385 line 10 and lines 21-22 with page 60 lines 19-21 and page 51 line 35 to page 52 line 6.
organizing said selected code in a sequence with a plurality of message components, said sequence including said generated first, second, and third elements or fields, said selected code organized in said sequence with said plurality of message components and said generated first, second, and third elements or fields comprising said at least a first message.	Page 385 lines 24-31 with page 59 line 33 and page 57 lines 27-33. Page 385 lines 15-16.

yy.   **Claim 52**

generating a first instruction specifying a control function to be executed;	Page 385 line 10 and page 26-27 with page 45 lines 17-25.
generating a second instruction specifying a data structure, length, or format;	Page 385 line 10 and lines 21-22 with page 59 line 34 to page 60 line 1 and page 51 line 35 to page 52 line 6.
processing data specifying a condition, said data in said structure, length, or format specified by said second instruction;	Page 44 line 33 to page 45 line 3 with page 490 line 28 to page 491 line 6.
organizing said first and second instructions and said processed data in a sequence, said sequence comprising a command;	Page 385 lines 24-31 and page 387 line 25 with page 490 lines 25-30. Page 44 lines 14-26.
transmitting said at least a first message and said command.	Page 386 lines 12-14 and page 387 lines 19-25 with page 490 lines 31-34.

zz.   **Claim 53**

receiving said information transmission at a signal generator operatively connected to said transmitter;	Page 384 lines 33-35 #82 & #83 in Fig. 6B.
generating one or more second messages, said one or more second messages containing multiple elements of both fixed and variable length, said one or more second messages including (1) cadence information which is effective at one or more receiver stations to execute a predetermined instruction and (2) at least one variable length element containing one or more instructions to be directed to a processor;	Page 383 lines 26-34. Page 384 lines 13-23. Page 60 lines 19-21 & 27-29 and page 51 lines 25-26. Page 60 lines 12-17, page 384 line 14, page 171 lines 14-18 & 28-30. Page 384 lines 19-22 with page 383 lines 33-34 and page 483 lines 2-9.
embedding said second message into said first information transmission in a sequence with said first message, said first message and said second message in said first information transmission in said sequence comprising a message stream; and	Page 384 lines 30-35. Page 386 lines 7-14. Page 59 lines 31-33.
transmitting said information transmission and said message stream.	Page 384 line 30 to page 385 line 2 and page 386 lines 7-14.

aaa.   **Claim 54**

The method of claim 53, further comprising the step of transmitting at least some of said television programming.	Page 384 line 33 to page 385 line 2 with page 374 lines 32 to page 375 line 4, page 355 lines 5-17, page 340 lines 33-34 and page 344 lines 26-30

bbb.   Claim 55

generating at least one fixed length message element containing specific cadence information which operates at said at least one receiver station to execute one or more preprogrogrammed operating instructions;	Page 385 line 10 with line 26, page 60 lines 13-21 & lines 27-29. Page 171 lines 14-18 and lines 28-30.
generating a plurality of variable length message elements, each variable length element containing at least one instruction and having one of (1) an internal length token, and (2) an associated signal designating a file, said plurality of variable length message elements containing instructions directed to different ones of said plurality of processors;	Page 385 line 10 with lines 28-30, page 44 lines 16-18, page 51 lines 25-26 page 53 lines 33-34. Page 52 lines 13 and page 385 line 29. Page 52 lines 3-6. Page 385 line 31. Page 171 line 34 to page 172 line 5 and page 171 lines 1-7.
organizing said generated at least one fixed length message element and said generated plurality of variable length message elements in a sequence, said at least one fixed length message element and said generated plurality of variable length message elements in said sequence comprising at least a portion of a message stream;	Page 385 lines 24-31. Page 385 lines 14-16.
transmitting said message stream.	Page 384 line 30 to page 385 line 2 and page 386 lines 7-14.

3.   Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 2-55 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

With respect to the first paragraph of section 7 of the Office Action, the language at issue, i.e., "on the basis of a plurality of comparisons," has been deleted. "Outputting selected other portions of said message stream," has been changed to -- selecting and outputting --.

With respect to the second paragraph of section 7 of the Office Action, the language at issue, i.e., "determining the length or format of at least one segment," has been deleted.

With respect to the third paragraph of section 7 of the Office Action, the language at issue, "availability, use or usage," has been supported in the above section under Applicants' response to 35 U.S.C. § 112, first paragraph.

With respect to the fourth paragraph of section 7 of the Office Action, the language of claim 3 has been amended to positively recite the "receiver station" in the body of the claim as such:

> ...generating a control portion of said message stream at said transmission station that is effective *at a receiver station...*

> and,

> ...transmitting said message *stream to be received at said receiver station.*

With respect to the fifth paragraph of section 7 of the Office Action, claim 3 has been amended to recite:

> receiving an information transmission *containing a message stream* at a transmission station;

> *generating a control portion* of said message stream at said transmission station....

With respect to the sixth paragraph of section 7 of the Office Action, Applicants have amended claim 4 to better clarify the alternative language in that the instruct signal is effective to either:

> (a) effect a transmitter station to generate at least a first message that is effective to enable a receiver station..., or

> (b) effect a first receiver station to generate at least a first message that is effective to enable a second receiver station...,

such that the "at least a first message" is confined within the context of either option (a) or (b).

With respect to the seventh paragraph of section 7 of the Office Action, in a similar manner as recited immediately above, the "television programming" is confined within the context of either option (a) or (b).

With respect to the eighth paragraph of section 7 of the Office Action, Applicants have amended the claim language clarify the alternative language in the step of receiving a receiving a transmitter control signal which now recites that it the signal

> ...operates at one of said transmitter station *and said first receiver station...,*

to be consistent with the alternative language in the previous step of receiving and instruct signal.

4.   Conclusion

Applicants respectfully submit that claims 2-55 and amended claims 2-4, 7, 19-21, 25-26, 33, 35, 37-38, 40-41, 46-47, 50, 52-53 & 55 of the subject application particularly point out and claim the subject matter sufficiently for one of ordinary skill in the art to comprehend the bounds of the claimed invention. The test for definiteness of a claim is whether one skilled in the art would understand the bounds of the patent claim when read in light of the specification, and if the claims so read reasonably apprise those skilled in the art of the scope of the invention, no more is required. *Credle v. Bond,* 25 F.3d 1556, 30 USPQ2d 1911 (Fed. Cir. 1994). The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. *In re Warmerdam,* 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994). Applicants have amended the claims to enhance clarity and respectfully submit that all pending claims are fully enabled by the specification and distinctly indicate the metes and bounds of the claimed subject matter.

Applicants believe that the above-recited changes are sufficient to overcome the rejections under 35 U.S.C. § 112, first and second paragraph, and respectfully request withdrawal of these rejections. Applicants provide these specific embodiments in support of the pending claims by way of example only. The claims must be read as broadly as is reasonable in light of the specification, and Applicants in no way intend that their submission of excerpts/examples be construed to unnecessarily restrict the scope of the claimed subject matter.

E. Response to Obviousness Rejection of Claims

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference to combine the teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references combined) must teach or suggest all the claim recitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not based on Applicants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). MPEP 706.02(j).

> 1. **35 U.S.C. § 103 (a) Rejection over Brennand et al., U.S. Pat. No. 4,744,080 in view of Drury et al., U.S. Pat. No. 4,636,851.**

Claims 2, 5-7, 19-25, 32 33, 37, 39 & 40 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Brennand et al., U.S. Pat. No. 4,744,080 in view of Drury, et al., U.S. Pat. No. 4,636,851.

With respect to Applicants' amended independent claim 2, the Office Action equates that Brennand et al.'s digital services and the information that identifies the coding scheme used to code the service information with Applicants' selected one message and the control information, respectively.

Brennand et al. states regarding the reception and conversion of digital services generally that:

> ...means also remote from said recovery devices for centrally receiving and interpreting control information when present in said packets for said selected service or services and for applying to the associated recovery device or devices the coding interpretation information required as to the coding scheme for that [of] each selected service. (Column 2 lines 12-19.)

Specifically, this is accomplished by...

> [t]he use of the packet bus 25 [that] allows the recovery of any service within the multiplex by connecting an appropriate service decoder (a service recovery device) to the bus. This gives a building block structure fore data decoding enabling a setmaker to provide as many chosen simultaneous services as required simply by duplicating recovery devices. (Column 4 lines 28-34.)

> The recovery devices compare the address of each packet on packet bus 25 with their pre-programmed values, accepting for processing only those packets where the address agree[s]..... The packet addresses on both the data lines of the packet bus 25 are monitored simultaneously by all recovery devices. (Column 5 lines 3-9.)

In summary, Brennand et al. discloses a system wherein recovery devices are preprogrammed to extract and deliver certain types of digital services with audio and digital data as requested and/or authorized by the subscriber.

The Office Action stated that Brennand et al. failed to teach: 1) that the information transmission comprises a "digital television signal;" 2) that the memory which stores the selected control information comprises a "register" memory; and 3) that the format of the recited "at least one segment" is determined by a plurality of comparisons as said register memory. The Office Action further stated that Drury et al. taught an information transmission comprising a digital television signal, in addition to that the elements of a memory comprising a register and the format of the recited "at least one segment" determined by a plurality of comparisons as said register memory

53

were inherent and obvious to one of ordinary skill at the time the invention was made. However, Applicants have amended the claims to delete the language directed toward "at least one memory register" and "determining the length or format of at least one segment of said message stream on the basis of a plurality of comparisons at said at least one register memory," and therefore the rejection as to this language is moot.

With respect to the amended claim language of claim 2, Brennand et al. either alone or in combination with Drury et al. fails to teach or suggest <u>selecting and outputting under the control of said control processor, other portions of said message stream to said plurality of processors, based on said control information</u>. The Office Action equates Applicants' control processor with the sync and data extraction unit 19 of Brennand et al. MACSYNC unit 19 fails to select and output other portions of said message stream to the plurality of processors 26 & 27 based on the control information contained in the address of each packet on packet bus 25. Brennand et al. teaches that the control information in the packets are sent down packet bus 25 to be compared with pre-programmed values at units 26 & 27, thereupon accepting for processing only those packets where the address agree with the pre-programmed input. (Column 5 lines 3-9.) Brennand et al.'s control information not only fails to accomplish the same function as Applicants' claim recitation of control information, but Brennand et al. teaches away from Applicants' claim recitation with Brennand et al.'s control information used for identification purposes only at units 26 & 27.

Therefore, Brennand et al. in view of Drury et al. fails to teach or suggest <u>processing **said selected other portions of said message stream** simultaneously at said plurality of processors,</u> since Brennand et al. in view of Drury et al. fails to teach or suggest **selecting and outputting** <u>under the control of said control</u>

processor, **other portions of said message stream** to said plurality of processors, **based on said control information.**

Additionally, Brennand et al. in view of Drury et al. fails to teach or suggest <u>controlling the timing of communicating television programming in accordance with said message stream</u>, since the digital services of Brennand et al. are used only for the purpose of providing services to a subscriber and are not used to control any facet of the presentation of the television programming finally output via lines 16-18 of Brennand et al. *See* Brennand et al.'s Fig. 1, and column 3 line 20 to column 4 line 9.

Finally, Brennand et al. in view of Drury et al. fails to teach or suggest **storing information evidencing** <u>the availability, use or usage of said television programming or said message stream</u>. There is no mention in either reference as to Applicants' newly amended claim recitation of storing information evidencing a particular property, state or history of television programming, or of the message stream itself.

Therefore, Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claim 2 be withdrawn since the prior art references neither alone nor in combination teach or suggest all of Applicants' claim recitations.

Claims 19-25, 32, 33, 37 & 39-40 depend upon independent claim 2. As discussed *supra,* Brennand et al. in view of Drury, et al. fail to disclose every element of claim 2 and thus, *ipso facto,* Brennand et al. in view of Drury, et al. fail to anticipate dependent claims 10 & 13-16, and therefore, this rejection should be withdrawn and the claim be permitted to issue. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

2.   35 U.S.C. § 103 (a) Rejection over Brennand et al. in view of Drury et al. and further in view of Vigarie et al.

Claims 10 & 13-16 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Brennand et al. in view of Drury, et al., and further in view of Vigarie et al., U.S. Pat. No. 4,748,619.

Claims 10 & 13-16 depend upon independent claim 2. As discussed *supra*, Brennand et al. in view of Drury, et al. fail to disclose every element of claim 2 and thus, *ipso facto*, Brennand et al. in view of Drury, et al. fail to anticipate dependent claims 10 & 13-16, either alone, in combination with themselves, or further in view of Vigarie et al., and therefore, this rejection should be withdrawn and the claims be permitted to issue. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

3.   35 U.S.C. § 103 (a) Rejection over Block et al., U.S. Pat. No. 4,225,884.

Claim 3 is rejected under 35 U.S.C. § 103 (a) as being unpatentable over Block et al., U.S. Pat. No. 4,225,884.

With respect to Applicants' newly amended independent claim 3, Block et al. fails to teach or suggest generating a control portion of said message stream at said transmission station that is effective at a receiver station to cause said first control processor to select portions of said message stream that control said control processor and said remainder of said plurality of processors to perform different functions comprising (i) processing television programming and (ii) controlling the timing of communicating said television programming. Nowhere in the reference does it teach or suggest a generated control portion effective at a receiver station to cause a control processor to select portions of a message stream that control the control processor and a plurality of processors to perform

56

different functions of processing and controlling the timing of communicating television programming.

Applicants respectfully request that the 35 U.S.C. §103(a) rejection of amended claim 3 be withdrawn since the prior art reference fails to teach or suggest all of Applicants' claim recitations.

Claims 41-48 depend upon independent claim 3. As discussed *supra*, Block et al., fails to disclose every element of claim 3 and thus, *ipso facto*, Block et al. fails to anticipate dependent claims 41-48, and therefore, this rejection should be withdrawn and the claim be permitted to issue. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

> **4.   35 U.S.C. § 103 (a) as being unpatentable over Brennand et al., U.S. Pat. No. 4,744,080 in view of Murray, U.S. Pat. No. 4,706,109.**

Claims 3 & 41-48 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Brennand et al., U.S. Pat. No. 4,744,080 in view of Murray, U.S. Pat. No. 4,706,109.

With respect to Applicants' newly amended independent claim 3, Brennand et al. in view of Murray fails to teach or suggest either alone or in combination, generating a control portion of said message stream at said transmission station that is effective at a receiver station to cause said first control processor to select portions of said message stream that control said control processor and said remainder of said plurality of processors to perform different functions comprising (i) processing television programming and (ii) controlling the timing of communicating said television programming. Nowhere in the references does it teach or suggest a generated control portion effective at a receiver station to cause a control processor to select portions of a message

stream that control the control processor and a plurality of processors to perform different functions of processing and controlling the timing of communicating television programming.

Applicants respectfully request that the 35 U.S.C. §103(a) rejection of claim 2 be withdrawn since the prior art references neither alone nor in combination teach or suggest all of Applicants' claim recitations.

Claims 41-48 depend upon independent claim 3. As discussed *supra*, Brennand et al. in view of Murray, fails to disclose every element of claim 3 and thus, *ipso facto*, Brennand et al. in view of Murray fails to anticipate dependent claims 41-48, and therefore, this rejection should be withdrawn and the claim be permitted to issue. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

F.   Claims Not Rejected Over Prior Art of Record

Claims 8, 9, 11, 17, 18, 26-31, 35, 35 & 38 have not been rejected over the prior art and Applicants assume these claims would be in condition for allowance but for the § 112 first and second paragraph rejections and if the prior art rejection of independent claim 2 is overcome.

Claims 4 & 49-55 have not been rejected over the prior art and Applicants assume these claims would be in condition for allowance but for the § 112 first and second paragraph rejections.
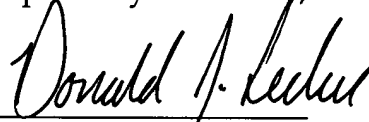
III.   CONCLUSION

In accordance with the foregoing it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. Further, all pending claims are patentably distinguishable over the prior art of record, taken in any proper combination. Thus, there being no further outstanding objections or rejections, the application is submitted as being in a condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining informalities to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such informalities.

Respectfully submitted,

Date: <u>October 2, 1998</u>
HOWREY & SIMON
1299 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Thomas J. Scott, Jr.
Reg. No. 27,836
Donald J. Lecher
Reg. No. 41,933
Attorneys for Applicants
Tel: (202) 383-6790

APPENDIX A

APPENDIX A

The following foreign reference has been cited by Applicants in the Information disclosure Statements filed 12-11-95, 12-22-95, 2-6-96, 4-17-96 and 4-7-97. Applicants have further included the following relevancy statement as well as an English abstract (in the case of foreign patents), thus meeting the requirements as set forth in 37 CFR 1.98 and MPEP § 609.

For the Information Disclosure Statement filed 12-22-95:

23 38 330   February 13, 1975   Germany

This reference discloses television receivers that transmit control signals to a decoder/processor combination.

For the Information Disclosure Statement filed 2-6-96:

61-050470   March 12, 1986   Japan

This reference discloses a program engagement device that displays the program content at a television receiver and includes a display output control device.

60-61935   April 9, 1985   Japan

This reference discloses a system that generates, detects, communicates, and/or converts digital signals.

For the Information Disclosure Statement filed 4-17-96:

2 058 681   June 15, 1972   Germany

This reference discloses a television mode arrangement for transmitting, receiving, and presenting coded information.

For the Information Disclosure Statement filed 4-7-97:

0 020 242   December 10, 1980   European

This reference discloses a teletext character alignment process.

0 046 108   February 17, 1982   European

This reference discloses a integrated circuit interface between a television receiver and recorder.

0 049 184   April 7, 1982   European

This reference discloses a pocket teaching aid using a television receiver with a teletext system.

0 055 167   June 30, 1982   European

This reference discloses a teletext CRT display for messages from a composite memory.

0 077 712   April 27, 1983   European

This reference discloses a multi-channel digital packet television broadcasting system.

0 078 185   May 4, 1983   European

This reference discloses a digital packet broadcasting system using television transmissions.

2 496 376   **June 18, 1982**   **France**

This reference discloses a teletext display of data on the television screen.

2 516 733   **May 5, 1983**   **France**

This reference discloses an error controller for a teletext television decoder.

2 823 175   **November 29, 1989**   **Germany**

This reference discloses a teletext information display for television transmission.

24 53 441   **May 13, 1976**   **Germany**

This reference discloses a wideband signal transmission with digital to image signal conversion.

DE 30339949 May 6, 1982   **Germany**

This reference discloses a method for the generation of teletext display having a color character contrast.

DE 3112249   **October 7, 1982**   **Germany**

This reference discloses a processing signals from either a colored television receiver or from a video text decoder.

DE 3020787   **December 17, 1981**   **Germany**

This reference discloses a television transmission system that sends extra data during a blanking period.

WO 80/00292   February 21, 1980 Japan

This reference discloses a decoder for a television receiver that has a color component that splits signals and recombines the signals into a composite drive current signal.

WO 83/00789 March 3, 1983   Japan

This reference discloses an image display unit which displays received image signals via a memory, wherein the image signals include teletext displays of weather reports or television programs.

Graf, P.H., "Antiope-Uebertragung fuer Breitbandige Videotex-Verteildienste," 1981.

This reference shows an Antiope demodulator/detector.

Heller, Arthur, "VPS - Ein Neues System Zuragsgesteurten Programmanfzeichnung, Rundfunk technisde Mitteilungen, pp. 162-169.

This reference discloses a decoding system for use with a VCR.

. Marti, B et al., Discrete, service de television cryptee, Revue de radiodiffusion - television (1975), pp. 24-30.

This reference discloses an analog decryption system.

Strauch, D., "(Las Media De Telecommunication Devant la Rapture. Les Nonvellas Methodes Presentees a L'Eposition International 1979 de Radio (Et Television)) 1979.

This reference is a discussion of videotext, teletext, ceefax, oracle, and antiope.

APPENDIX B

INFORMATION DISCLOSURE STATEMENT BY APPLICANT CITATION FORM	Attorney Docket No. 05634.0208	Serial No. 08/449,097
	Applicant(s) John C. Harvey and James W. Cuddihy	
	Filing Date May 24, 1995	Group Art Unit 2737

UNITED STATES PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS/ SUBCLASS	FILING DATE*
	Re 27,810	November 20, 1973	Buehrle	325/321	
	2,418,127	April 1, 1947	Labin	178/44	
	2,563,448	August 7, 1951	Aram	178/5.1	
	3,071,649	January 1, 1963	Goodall	179/1.5	
	3,107,274	October 15, 1963	Roschke	178/5.1	
	3,133,986	May 19, 1964	Morris et al.	178/5.1	
	3,251,051	May 10, 1966	Harries	340/345	
	3,470,309	September 30, 1969	Nyberg	178/5.1	
	3,478,166	November 11, 1969	Reiter et al.	178/5.1	
	3,526,843	September 1, 1970	Sanville	329/104	
	3,546,684	December 8, 1970	Maxwell et al.	340/172.5	
	3,639,686	February 1, 1972	Walker et al.	178/5.8R	
	3,649,749	March 14, 1972	Gibson	178/5.6	
	3,651,261	March 21, 1972	Guanella	178/22	
	3,666,888	May 30, 1972	Sekimoto	178/69.5 TV	
	3,723,637	March 27, 1973	Fujio et al.	178/5.2R	
	3,746,799	July 17, 1973	Gentges	178/22	
	3,755,624	August 28, 1973	Sekimoto	178/69.5 TV	
	3,769,579	October 30, 1973	Harney	325/31	
	3,773,979	November 20, 1973	Kirk, Jr. et al.	179/15 FD	
	3,777,053	December 4, 1973	Wittig et al.	178/5.1	
	3,789,131	January 29, 1974	Harney	178/5.1	
	3,794,922	February 26, 1974	Osborn et al.	325/53	
	3,795,763	March 5, 1974	Golding et al.	178/5.6	
	3,813,482	May 28, 1974	Blonder	178/5.1	
	3,826,863	July 30, 1974	Johnson	178/5.1	
	3,859,596	January 7, 1975	Jannery et. al.	325/31	
	3,882,289	May 6, 1975	Walding et al.	200/11 D	
	3,885,089	May 20, 1975	Callais et al.	178/5.1	
	3,889,054	June 10, 1975	Nagel et al.	178/6.8	
	3,894,177	July 8, 1975	Howell et al.	178/5.6	
	3,896,262	July 22, 1975	Hudspeth et al.	178/5.1	
	3,896,266	July 22, 1975	Waterbury	179/1 SB	

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS/ SUBCLASS	FILING DATE*
	3,916,091	October 28, 1975	Kirk, Jr. et al.	178/5.1	
	3,924,059	December 2, 1975	Horowitz	178/5.1	
	3,950,618	April 13, 1976	Bloisi	179/2 AS	
	3,958,081	May 18, 1976	Ehrsam et al.	178/22	
	3,975,585	August 17, 1976	Kirk, Jr. et al.	178/5.1	
	3,990,012	November 2, 1976	Karnes	325/308	
	3,996,586	December 7, 1976	Dillon et al.	340/347 DD	
	4,004,085	January 18, 1977	Makino et al.	340/324	
	4,008,369	February 15, 1977	Theurer et al.	358/84	
	4,013,875	March 22, 1977	McGlynn	235/150.2	
	4,015,286	March 29, 1977	Russell	358/13	
	4,019,201	April 19, 1977	Hartung et al.	358/124	
	4,020,419	April 26, 1977	Caspari et al.	325/421	
	4,024,574	May 17, 1977	Nieson	358/117	
	4,024,575	May 17, 1977	Harney et al.	358/118	
	4,027,267	May 31, 1977	Larsen	329/106	
	4,027,331	May 31, 1977	Nicol	358/135	
	4,042,958	August 16, 1977	Saylor et al.	358/141	
	4,044,376	August 23, 1977	Porter	358/84	
	4,045,814	August 30, 1977	Hartung et al.	358/124	
	4,054,911	October 18, 1977	Fletcher et al.	358/141	
	4,064,490	December 20, 1977	Nagel	364/2000	
	4,070,693	January 24, 1978	Shutterly	358/123	
	4,075,660	February 21, 1978	Horowitz	358/124	
	4,079,419	March 14, 1978	Seigle et al.	358/193	
	4,081,754	Mach 28, 1978	Jackson	325/396	
	4,081,832	March 28, 1978	Sherman	358/124	
	4,086,434	April 25, 1978	Bocchi	79/2 AM	
	4,088,958	May 9, 1978	Suzuki et al.	325/396	
	4,091,417	May 23, 1978	Nieson	358/117	
	4,095,258	June 13, 1978	Sperber	358/120	
	4,096,542	June 20, 1978	Pappas et al.	361/196	
	4,104,681	August 1, 1978	Saylor et al.	358/141	
	4,107,734	August 15, 1978	Percy et al.	358/84	
	4,107,735	August 15, 1978	Frobach	358/84	
	4,112,317	September 5, 1978	Everswick	307/308	
	4,112,383	September 5, 1978	Burgert	329/50	
	4,114,841	September 19, 1978	Muhlfelder et al.	244/166	
	4,120,003	October 10, 1978	Mitchell et al.	358/142	
	4,124,887	November 7, 1978	Johnson et al.	364/107	
	4,126,762	November 21, 1978	Martin et al.	179/2A	
	4,135,213	January 16, 1979	Wintfeld et al.	358/142	
	4,142,156	February 27, 1979	Freund	325/309	

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS/ SUBCLASS	FILING DATE*
	4,145,717	March 20, 1979	Guif et al.	358/121	
	4,148,066	April 3, 1979	Saylor	358/127	
	4,156,253	May 22, 1979	Steudel	358/11	
	4,156,931	May 29, 1979	Adelman et al.	364/900	
	4,163,252	July 31, 1979	Mistry et al.	358/118	
	4,180,709	December 25, 1979	Cosgrove et al.	179/2 AM	
	4,199,656	April 22, 1980	Saylor	178/66.1	
	4,199,781	April 22, 1980	Doumit	358/83	
	4,199,809	April 22, 1980	Pasahow et al.	364/200	
	4,207,524	June 10, 1980	Purchase	375/22	
	4,214,273	July 22, 1980	Brown	358/188	
	4,215,366	November 13, 1984	Davidson	358/124	
	4,216,497	August 5, 1980	Ishman et al.	358/84	
	4,222,068	September 9, 1980	Thompson	358/120	
	4,225,884	September 30, 1980	Block et al.	358/122	
	4,245,246	January 13, 1981	Cheung	358/124	
	4,246,611	January 20, 1981	Davies	358/194	
	4,247,947	January 27, 1981	Miyamoto	455/38	
	4,250,521	February 10, 1981	Wright	358/8	
	4,258,386	March 24, 1981	Cheung	358/84	
	4,266,243	May 5, 1981	Shutterly	358/121	
	4,272,784	June 9, 1981	Saito et al.	358/127	
	4,273,962	June 16, 1981	Wolfe	179/7.1R	
	4,292,650	September 29, 1981	Hendrickson	358/123	
	4,295,155	October 13, 1981	Jarger et al.	358/12	
	4,301,542	November 17, 1981	Weintraub et al.	455/353	
	4,305,101	December 8, 1991	Yarbrough et al.	360/69	
	4,310,854	January 12, 1982	Baer et al.	358/143	
	4,316,217	February 16, 1982	Rifken	358/86	
	4,318,047	March 2, 1982	Dawson	328/112	
	4,323,921	April 6, 1982	Guillou	358/114	
	4,323,922	April 6, 1982	den Toonder et al.	358/117	
	4,329,711	May 11, 1982	Cheung	358/114	
	4,335,426	June 15, 1982	Maxwell et al.	364/200	
	4,340,906	July 20, 1982	den Toonder et al.	358/124	
	4,341,925	July 27, 1982	Doland	178/22.17	
	4,343,042	August 3, 1982	Schrock et al.	455/5	
	4,348,696	September 7, 1982	Beier	358/188	
	4,354,201	October 12, 1982	Sechet et al.	358/122	
	4,355,415	October 19, 1982	George et al.	455/185	
	4,358,672	November 9, 1982	Hyatt et al.	235/380	
	4,360,881	November 23, 1982	Martinson	364/493	
	4,361,848	November 30, 1982	Poignet et al.	358/1	

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS/ SUBCLASS	FILING DATE*
	4,361,851	November 30, 1982	Asip et al.	358/84	
	4,361,903	November 30, 1982	Ohta	455/2	
	4,365,267	December 21, 1982	Tsuda	358/84	
	4,378,470	March 29, 1983	Murto et al.	179/2 C	
	4,382,256	May 5, 1983	Nagata	340/825.44	
	4,385,384	May 24, 1983	Rosbury et al.	371/22	
	4,386,436	May 31, 1983	Kocher et al.	455/151	
	4,388,643	June 14, 1983	Aminetzah	358/123	
	4,388,644	June 14, 1983	Ishman et al.	358/84	
	4,390,898	June 28, 1983	Bond et al.	358/1199	
	4,390,901	June 28, 1983	Keiser et al.	358/147	
	4,392,135	July 5, 1983	Ohyagi	340/825.44	
	4,393,277	July 12, 1983	Besen et al.	179/2 A	
	4,408,345	October 4, 1983	Yashiro et al.	455/3	
	4,411,017	October 18, 1983	Talbot	455/26	
	4,414,621	November 8, 1983	Bown et al.	364/200	
	4,415,771	November 15, 1983	Martinez	179/5R	
	4,418,425	November 29, 1983	Fennel et al	455/27	
	4,424,533	January 3, 1984	Rzeszewski	358/167	
	4,425,578	January 10, 1984	Haselwood et al.	358/84	
	4,425,579	January 10, 1984	Merrell	358/86	
	4,425,664	January 10, 1984	Sherman et al.	375/8	
	4,427,968	January 24, 1984	York	340/310	
	4,429,385	January 31, 1984	Cichelli et al.	370/92	
	4,430,731	February 7, 1984	Gimple et al.	370/30	
	4,434,438	February 28, 1984	Rzeszewski	358/167	
	4,439,785	March 27, 1984	Leonard	358/120	
	4,450,481	May 22, 1984	Dickinson	358/114	
	4,450,531	May 22, 1984	Kenyon et al.	364/604	
	4,454,538	June 12, 1984	Toriumi	358/86	
	4,468,701	August 28, 1984	Burcher et al.	358/181	
	4,471,352	September 11, 1984	Soulliard et al.	340/825.44	
	4,475,123	October 2, 1984	Dumbauld et al.	358/114	
	4,476,535	October 9, 1984	Loshing et al.	364/480	
	4,484,218	November 20, 1984	Boland et al.	358/86	
	4,484,328	November 20, 1984	Schlafly	370/85	
	4,488,179	December 11, 1984	Kruger et al.	358/181	
	4,489,220	December 18, 1984	Oliver	179/2 AM	
	4,489,316	December 18, 1984	MacQuivey	340/700	
	4,494,142	January 15, 1985	Mistry	358/118	
	4,496,975	January 29, 1985	Noirel	358/147	
	4,504,831	March 12, 1985	Jahr et al.	340/870.03	
	4,506,387	March 9, 1985	Walter	455/612	

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS/ SUBCLASS	FILING DATE*
	4,510,623	April 9, 1985	Bonneau et al.	455/181	
	4,528,589	July 9, 1985	Block et al.	358/122	
	4,531,020	July 23, 1985	Wechselberger et al.	178/22.08	
	4,531,021	July 23, 1985	Bluestein et al.	178/22.08	
	4,540,849	September 10, 1985	Oliver	179/2 AM	
	4,543,616	September 24, 1985	Brooks	358/335	
	4,547,804	October 15, 1985	Greenberg	358/142	
	4,554,584	November 19, 1985	Elam et al.	358/165	
	4,558,464	December 10, 1985	O'Brien, Jr.	455/4	
	4,563,702	January 7, 1986	Heller et al.	358/119	
	4,566,030	January 21, 1986	Nickerson et al.	358/84	
	4,570,930	February 18, 1986	Matheson	273/1 E	
	4,578,536	March 25, 1986	Oliver et al.	179/2 AM	
	4,578,718	March 25, 1986	Parker et al.	360/10.3	
	4,592,546	June 3, 1986	Fascenda et al.	273/1 E	
	4,594,609	July 10, 1986	Romao et al.	358/119	
	4,595,952	June 17, 1986	Filliman	358/47	
	4,600,918	July 15, 1986	Belisomi et al.	340/711	
	4,600,921	July 15, 1986	Thomas	340/825.31	
	4,605,964	August 12, 1986	Chard	358/147	
	4,611,227	September 9, 1986	Brockhurst et al.	358/147	
	4,613,901	September 23, 1986	Gilhousen et al.	358/122	
	4,621,259	November 4, 1986	Schepers et al.	340/707	
	4,621,285	November 4, 1986	Schilling et al.	358/120	
	4,623,920	November 18, 1986	Dufresne et al.	358/122	
	4,626,892	December 2, 1986	Nortrup et al.	358/21 R	
	4,633,297	December 30, 1996	Skerlos et al.	358/22	
	4,636,858	January 13, 1987	Hague et al.	358/147	
	4,638,357	January 20, 1987	Heimbach	358/121	
	4,639,779	January 27, 1987	Greenberg	358/142	
	4,646,145	February 24, 1987	Percy et al.	358/84	
	4,649,533	March 10, 1987	Chorley et al.	370/58	
	4,658,290	April 14, 1987	McKenna	358/84	
	4,677,685	June 30, 1987	Kurisu	455/4	
	4,694,490	September 15, 1987	Harvey et al.	380/20	
	4,704,725	November 3, 1987	Harvey et al.	380/48	
	4,706,121	November 10, 1987	Young	358/142	
	4,710,919	December 1, 1987	Oliver et al.	370/96	
	4,710,955	December 1, 1987	Kauffman	380/10	
	4,718,107	January 5, 1988	Hayes	455/4	
	4,723,302	February 2, 1988	Fulmer et al.	455/2	
	4,736,422	April 5, 1988	Mason	380/120	
	4,744,080	May 10, 1988	Brennand et al.	280/21	

EXAMINER INITIAL	PATENT NUMBER	PATENT DATE	NAME	CLASS/ SUBCLASS	FILING DATE*
	4,751,732	June 14, 1988	Kamitake	380/20	
	4,754,326	June 28, 1988	Kram et al.	364/900	
	4,768,144	August 30, 1988	Winter et al.	364/200	
	4,768,229	August 30, 1988	Benjamin et al.	380/20	
	4,782,401	November 1, 1988	Faerber et al.	358/335	
	4,785,420	November 15, 1988	Little	364/513.5	
	4,796,181	January 3, 1989	Wiedmer	364/406	
	4,803,725	February 7, 1989	Horne et al.	380/44	
	4,805,020	February 14, 1989	Greenberg	358/147	
	4,809,274	February 28, 1989	Walker et al.	371/37	
	4,816,904	March 28, 1989	McKenna et al.	358/84	
	4,841,386	June 20, 1989	Schiering	360/69	
	4,843,482	June 27, 1989	Hegendorfer	358/335	
	4,855,842	August 8, 1989	Hayes et al.	358/342	
	4,862,268	August 9, 1989	Campbell et al.	358/141	
	4,879,611	November 7, 1989	Fukui et al.	360/69	
	4,885,579	December 5, 1989	Sandbank	340/825.72	
	4,888,796	December 19, 1989	Olivo, Jr.	379/101	
	4,982,430	January 1, 1991	Frezza et al.	380/50	
	4,993,066	February 12, 1991	Jenkins	380/16	

* If Pertinent

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES	NO
	0 020 242	December 10, 1980	European	G09G 1/16		X
	0 046 108	February 17, 1982	European	H04N 5/76		X
	0 049 184	April 7, 1982	European	G09B 7/08		X
	0 055 167	June 30, 1982	European	G09G 1/16		X
	0 056 649	July 28, 1982	Euorpean	H04N 5/44	X	
	0 077 712	April 27, 1983	European	H04N 7/00		X
	0 078 185	May 4, 1983	European	H04N 7/00		X
	1,189,612	June 25, 1985	Canada	Ho4n 7/08	X	
	1,216,977	June 8, 1983	Canada	H04M 11/00	X	
	1,396,981	June 11, 1975	United kingdom	H04H 1/00	X	
	1,523,307	August 31, 1978	Great Britain	H03K 5/08	X	
	1,543,502	April 4, 1979	United Kingdom	G08B9/00	X	
	1,582,563	January 14, 1981	United Kingdom	G08B9/00	X	
	1,584,111	February 4, 1981	United Kingdom	G08B9/00	X	
	2,051,527	January 14, 1981	Great Britain	G06F 3/153	X	
	2,067,379	July 22, 1981	Great Britain	H04L 1/24	X	
	2,090,504	July 7, 1982	Great Britain	H04N 3/16	X	
	2,103,455	February 16, 1983	Great Britain	H04N 1/00 7/12	X	
	2,496,376	June 18, 1982	France	H04N 7/00		X
	2,516,733	May 5, 1983	France	H04N 7/00		X
	2,823,175	November 29, 1979	German	G06F 3/12		X
	24 53 441	May 13, 1976	Germany	H04L 9/00		X
	DE 3039949	May 6, 1982	German	H04M 3/42		X
	DE 3112249	October 7, 1982	German	G09G 1/28		X
	80/02901	December 24, 1980	France	H04N 7/16		X
	857,862	January 4, 1961	United Kingdom	40 (1)	X	
'	DE 3020787	December 17, 1981	Germany	H04N 7/08		X
	GB 2 081 948 A	February 24, 1982	United Kingdom	H04Q 9/00	X	
	WO80/00292	February 21, 1980	Japan	H04N9/16		X
	WO83/00789	March 3, 1983	Japan	H04N 7/08		X